UDOT
2060 SOUTH 2760 WEST
CONFERENCE ROOM 230

Conducting: Dave Fletcher, Acting ITS Director

Attending:
    <u>Board Members</u>
    Lt. Colonel Bart Berry, National Guard
    Carlos Braceras, Deputy Director, Department of Transportation
    Dave Fletcher, Acting Director, Information Technology Services
    Lloyd Johnson, Info Service Director, Department of Natural Resources
    Christine Mitchell, Deputy Director, Department of Corrections
    Mike Petersen, Executive Director, Utah Education Network

    <u>Staff and Visitors</u>
    Phil Bates, MIS Operations, Department of Public Safety
    Doug Chandler, Technical Services, Information Technology Services
    Tim Cornia, IT Manager, Department of Public Safety
    Ken Cowley, CIO, Salt Lake City Corporation
    Carol Groustro, Director, Department of Public Safety Communications Bureau
    Jennifer Hemenway, IT Analyst, Criminal & Juvenile Justice
    Jake Hunt, Utah Communications Agency Network
    Mark Peck, Captain, SLCPD
    Jeanie Watanabe, GOPB, CIO Office
    Steve Whittaker, Sr. Technical Consultant, Salt Lake City IMS
    Boyd Webb, Information Technology Services

Agenda

Dave Fletcher said the Governor likes the concept of UWIN and would like us to continue with its agenda. However, all IT will be scrutinized this year; and the transition could change the way things are implemented. UWIN will continue to work toward its agenda.

I. Omni link Report
Phil Bates

- Regional centers added:
    - Box Elder waiting for circuits to be connected in February
    - Grand County connections being engineered in February/March
    - San Juan going through a process of taking all their gel controls to have a stand alone; then upgrade radio equipment and connection
    - Logan assessed and in process of ordering equipment for April/May to connect
- UCAN moving forward for end of February or first of March
- Southern Utah flood: Technical meeting afterward reported the system functioned performed well. A lot of the local communication was lost; however, they were able to reach other assets to bridge the gap. Incident allowed EOC in SLC to listen, monitor, and interact with the local area. National Guard reported it worked well and was very effective.
- Salt Lake City Corporation, Ken Cowley, said upgrades will be done next week. Phil said they wanted to do some testing between the B and your system and this will be arranged in the next meeting which is Monday, 1/7/05.

II. Legislative Update
Dave Fletcher

- $744,000 funding approved by the Governor's office in their budget. In anticipation of HB109, they did not approve any of the IT budgets within DAS. July 1, 2005, ITS will cease to exist in its current format.

- HB109
  - ITS slated for some major structural changes. Wednesday, 2/2/05, Governor Huntsman met with his cabinet to talk about reorganization of IT for the state of Utah and enlisted their support in this process. This bill (87 pages) was released that afternoon.
  - Impacts the way the state members will interact with UWIN committee
  - Consolidates IT in the state of Utah under the CIO into three divisions:
    - Enterprise Services
    - Integrated Services
    - Agency Services
  - Public Education and higher education are excluded from the organization.
  - Outlines a process for transition period from July 1, 2005 through July 1, 2006 into that structure, requiring all state agencies to support that transition
  - Important that UWIN try to work through that process. Wireless services, probably the most significant for our organization, will probably be in Enterprises Services. UWIN should push some key initiative issues forward.
- HB216
  - Creates a statewide Global Positioning System
  - Included $1.5 million funding to roll out in 2006
  - Network of 55 base stations, giving us very precise GPS service. May decrease the amount of money available for 2005 and funding in over several years.
    - Carlos said it would save setup time for every survey crew every day and allow contractors to operate their equipment with much greater control. UDOT has done a lot of work on this.
    - Much more precise measurements for AGRC
    - Benefit E911, and other initiatives

SB100 Passed creates open public network on Capitol Hill. 802.11 network Cap Net that anyone can access in addition to the private, secure network that allows agency users to access the wide area network. Response has been very good. Media and lobbyists have been using to access bills. Funded through the Capitol Preservation Board.

III. Mobile Data Network Update
Doug Chandler

- Moving out of the beta testing, working out the bugs
- Tri-County area up and running for couple of week; they love it.
- Provisioning process needs to be worked on. When someone wants to be on the system, can they do it themselves, or try to limit because of potential problems?
- Millard County still working on the sites to their area to finish their new communications sites to finish I15 corridor.
- Biggest issue is the speed at which we are getting the base station so we can put them on the mountaintops. As of this morning, the original 20 sites will be completed very soon. Couple of high mountain sites won't get to until the snow melts.
- Met with Cedar City in dispatch center yesterday; people just waiting to place their orders. Working through Chief Alanson in their Homeland Defense region to align Homeland defense funding to purchase mobiles.
- Now that it is online, anyone who would like to test these units, Public Safety has approximately 200 for use in loaning out to test.
- Funding for the next phase
  - Phil reported that the Homeland funding in March/April- 20% for the state - should be available next couple of months with $1.2 million dollars for completion of statewide coverage.
- Vendors have been very flexible and work with finding the bugs. Moving quickly.
- Demo will be presented at the IT Open House in February.

IV. Narrowbanding Report
Boyd Webb, Strategic Network Planner

- Handout of report and copy Power Point presentation. Tasked with helping develop a plan to handle a change by the Federal Communications Commission.

- o FCC for 30 years has followed a wideband channel allocation plan in the VHF/UHF spectrum. These are the frequencies that many of our Public Safety people use in their radio systems.
    - o Metropolitan areas outside Utah have run out of frequencies.
    - o FCC decided to split the channels in half, and it requires all public safety entities to migrate to the narrowband frequencies. This is not new; ten years ago public safety was warned that this was coming. It was the imputes for the creation of UCAN ten years ago to migrate to 800 MHz would facilitate the growth needs of public safety. Unfortunately, most of the state is not on an 800 MHz system and is now confronted with this narrowband migration.
- Narrowband migration team's goals
    1. Become a clearing house of information to help agencies understand the impact of FCC regulatory action
    2. To conduct a technical evaluation of wideband and narrowband systems to develop a best practice standards to create a narrowband migration strategy
        a. Found after 18 months of traveling around the state and discussing this with agencies that there is not a uniform consensus. What works in Millard County does not work in Cache County, and what works in Salt Lake County, doesn't work in Grand Counties; priorities are different. Statewide achievement of this requirement is the ongoing discussion. Scope of this plan has expanded several times.
        b. What will the funding requirements be over ten years to meet this Federal mandate. Limited surveys, based on licenses and talking to several agencies, has come up with a little over $2 million dollars (minimum) for state and local government to replace just the radios which are not narrowband compliant. In addition to that we still have to relicense and reprogram frequencies. This minimum estimate does not include infrastructure. In ITS for the last two years we have been budgeting an amount to try to replace some of that infrastructure.
        c. The drop dead Deadline is 2013 when we can no longer operator on wideband services.
- Team has consolidated the options down to a basic three:
    1. Least expensive is relicensing all the existing frequencies and replace all the radios to meet the Federal requirement; however, this doesn't solve any of the frequency congestion problems along the way.
    2. Adopt some kind of a plan that would make those frequencies more efficient.
       A good proposal is the "Ritter plan" which adds a lost of cost to the migration. Besides migrating to the narrowband, you are changing a lot of infrastructure to accommodate these frequency changes. Essentially we would pair up frequencies and make everyone move off their existing frequencies onto the channel pairs.
    3. Migrate away from narrowband to an 800 MHz system like the Wasatch front has done. The eleven counties along the Wasatch front are virtually all 800 MHz now; it is a great system, but costs more money but takes advantage of the advanced technologies that you can't do with the current VHF spectrum.
- Team has proposed that the Technical Steering Committee make a recommendation on one of these three items and propose that to this committee of UWIN, which will hopefully choose a course that will allow us over the next 15 years to build a consensus statewide. Attitude of the smaller counties is that they do not have the tax base or funding and what they have works for them, and they don't see the need. Larger counties have licensed every available frequency, and they need more. They face a dilemma – they have to look or trunking or other technology to facilitate the need. If we develop the 'Ritter plan' requiring everyone to change each counties causes a domino affect.

Carlos Braceras: Will you be looking at the costs of state and local agencies for strategies…...different implementation and identify budget increases for respective agencies? Boyd said they had looked at that. Number of licenses for the different agencies in the affected spectrum gives a pretty good idea on replacement; however, all of the agencies reported that estimated number was low. Employee resources for determination is minimal.

Doug Chandler said it comes down to financing. If in 20 years you want to have the use of all the advanced technologies, it will impact everyone. The state will not be on one frequency spectrum as long as user fees is the only way to get there. The Steering Committee reviewed this

presentation last week in St. George, and has discussed it many times in one form or another for a year and a half.

Lt. Colonel Berry suggested that when an incident happens and we're not able to communicate effectively to a successful resolve, it is the going to get people's attention. A good case is to build that contract and comparison. Many different national solutions are being developed.

Boyd said what we need is leadership on catching the vision and providing the impetus for constructive change to move beyond a tribal type communications mentality and have consolidated into a network that works for all of us. UWIN can influence the process.

OPB supported that position; however without Federal funding initially, Jennifer suggested we wouldn't be where we are today. Push for the $744,000 funding; Jake said reality if that goes away, the funding to maintain what has already been done is not there. Lt Colonel said when they testified before the Legislative committee, there was open support for the initiative. UNWIN must do an adequate job of explaining the critical nature of what we're trying to accomplish.
Jake said technology will not change significantly enough by 2013 that whatever we do would be a mistake. The outlying areas will not have the same features and functionality that the core will.

Action Items:
Costs needed before making recommendations. Estimates for each of the three options.
- o Jennifer Hemenway stated we need to clearly articulate that to come up with a dollar amount and a number of users. Example, two times as expensive to go with this option, three times as expensive with this option, etc.? And these are the benefits associated with it.
- o Doug Chandler suggested consultant firm or extra staffing. Information would come from different sources or knowledgeable resources in wireless established with the new department- at least temporarily- to get the study done.
- o Difficult to separate policy from the money.
- o Federal funding is decreasing every year; the quicker the information is provided to public safety the better.

Susi Kontgis suggested if other states are dealing with the same issues, possible to obtain information they have already accumulated to use in our analysis? Doug Chandler responded that most research is specific to the terrain. Susi thought perhaps we could obtain updated cost information. See how they came up with the costs and leverage what we have done in the form of availability of equipment, cost associated, and kinds of equipment. Jake – information readily available; how helpful it would be is questionable.
Doug Chandler said vendors provided much of the information, which would require no investment of money.

Action Item: UWIN members review and come prepared at the next meeting to suggest action relevant to this issue: putting together a team, consulting, etc. An issue that needs to be understood better and where the most urgent needs are and how to fill those. CIO may be on board by then; make recommendations we can specifically act upon.

VII. Blackberry Enterprise Server Availability

Blackberry Enterprise Server is a server the Governor and most of his staff use. Tuesday 2/1/05 ITS was asked us to put in a Blackberry Enterprise server for GroupWise which will actually push out email and everything associated therein. Software is only in beta; went live with that yesterday after a day and a half.
If other agencies are interested in using the services, it may be used with PDA platforms as well – test with IPAX.
Carlos Baceras' new Motorola phone is server-based with active push; he is using Notify Link at the Department of Health.
Mike Petersen reported using Netcom at the University of Utah; have Mobile Office in which they are pushing groupWise. They intend to move from GroupWise.

VI.	802.11 Update

- Current list of 802.11 sites that are on the integrated secure access client
- Looking at extending other kinds of clients so that users would not have to have the Odyssey client to authenticate securely
- Education meeting report by Tim Cornia.   Chris Hessing discussed their set up with the 802.11 network.
    - o Meshed authentication model, which allows each department within Education to maintain their own authentication piece and still communicate with each other on a pier basis.
    - o You could authenticate on someone else's network that was set up on that pier to authenticate back to your authentication server maintained offsite. If we use that model as a state model, you can still maintain your own authentication piece, and allow you to give permission back to another authentication server. For example, St. George City decided to deploy that and the state of Utah did, you could create that agreement; and when Public Safety roamed into St. George, you hit their 802.11 hot spots, it first attempts to go to the St. George authentication server – realizes you are not there – takes a look at your user name and that it is a state address; this is the authentication server you use for state people; go on there and authenticate and then, even though you're using their infrastructure, I'm using my authentication to get on.
    - o Pointed out that the state could improve on Freeware or Opensource software for the authentication piece. Right now the state is standardized on the Odyssey Client, which for the type of deployment we would be talking about would be cost prohibitive - $30-50 a client. They found software that if you use 802.1X it was free. Lowers the cost substantially. Rick Gee and Nancy McConnell from ITS attended the meeting.
    - o Public Safety willing to put a technical person into a work group (perhaps other departments are willing to participate) and work with Education which has written some good white papers and very good technical documents, but have also taken it a step further and have it fully deployed on the UofU campus, along with other campuses as well. Working with ITS and trying to form a work group that can work closely with them that is more cost effective.
    - o Potentially anyone part of this interoperable solution would be able to authenticate on any of the networks that were cooperating on this so you could go potentially up to the University of Utah and authenticate to a state server.
    - o Phil said Homeland has a project with UofU PD, looking at the possibility of testing some of this between the U's network with Salt Lake City, some hot spots locations, and Capitol Hill which are in close proximity - even with some ITS structure to interact with some emergency responder people.
    - o Tim said a UWIN project purchased 700 mobile data, put it in a patrol car and see how it will work roaming from 802.11 and authenticating when out of that coverage, having it seamlessly roll to the 700 network.

V. Discussion of 2005 Action Items

Steve Proctor added the following items, not on the agenda:
Define and test a 4.9 gigahertz application
4.9 being the specific spectrum; eventually getting 802.11 conflicts that present problems because of the congestion. Experiment showed State Street had a dozen hot spots in one little area.
Test of wideband data applications in a wireless mode: photos, video, plans, and records.
Explore mixing 700 and 800 frequencies in the same trunked radio network.

Question on the **following two items, No. 5 and No. 6:** Is this was the right forum? Suggested we could make recommendations regarding these two items:

5. Support a freeze of the creation of any new data centers
Utah should focus its resources on increasing bandwidth and service to a relatively small set of highly available data centers that are optimized on the grid and support high-availability Linux clusters.

6. Develop a database of all data center (server farms greater than 3) assets in operation by the State of Utah-ITS

Utah should identify all significant computing assets that could be available to service wireless and wired network users on the grid
Changes because of HB209. Will be taken up by the new CIO.

No. 9   Develop a plan for expansion of the fiber network by June 2005
Fiber increasing is providing for the high-bandwidth data trafficking on state networks, including UEN, ITS, and supporting voice network services. Utah should coordinate all fiber resources for maximum utilization and capacity.

Mike Petersen considered this an important item. UEN is already moving ahead with significant development of fiber activity. We should all be aware of one another's plans and take advantage of each, as any wireless ties to UWIN.
Motion: Mike Petersen: Adopt as a UWIN initiative for 2005 and move ahead with the creation of a plan for fiber development and expansion. Establish a team comprised of representatives minimally UEN, SLC Corporation, UDOT, new DTS.
Second: Lloyd Johnson
Vote unanimously in the affirmative

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10.   Test VoIP applications on the mobile data network
As bandwidth increases on the MDN, voice applications on the MDN may become more feasible. Testing the serviceability of applications such as Skype on the network should occur each time network speed is increased.
Dave Fletcher talked to Val Oveson, previous CIO, about supporting an Enterprise project with VoIP; various agencies looking at that option. If we do it at a state level, we need to know the costs and benefits and plan in a coordinated way. Lt. Colonel Berry suggested if the interim plan supports the critical structure you have now, by the time the VoIP hits you can incorporate and already have a solution there.

No. 7 Sponsor a wireless application development contest at Utah universities.
The Rollins Center for eBusiness at BYU has been tremendously successful in obtaining business sponsorships for an annual contest for students and the sponsoring businesses. UWIN members could sponsor a similar contest for students in Utah colleges and universities. Students would receive a financial reward and UWIN users would receive basic applications that could be expanded upon by the UWUDF.
Students will do a lot of work, and come up with some pretty innovative things, and wouldn't require much of a prize.
Motion: Mike Petersen moved it would be more helpful if there were sponsorship from agencies in the state that were highly vested in wireless applications. UEN would be willing to co-sponsor it and use ties with the University to get it going, and Dave Fletcher said ITS could commit work on some things to partner.
Second: Christine Mitchell
Voted unanimously in the affirmative

If there are specific things you want to focus on we could draw up the contest, how much we fund it, and who is willing to participate.
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No. 2 and No. 4 go along with the above, suggested Chris.
No. 2 Create the Utah Wireless Users Development Forum
The forum would include representation for all of the key business areas on the UWIN board in state and local government and focus on development of applications for the wireless user both PDA and laptop form factors. This group could support the development of the list described in Item #4 as well as the review board for applications submitted in item #7. The forum would also promote the development and sharing of loosely coupled, highly leverageable web-services.

No. 4 Develop a list of 10 prioritized high-impact, location-based services by March 2005 with timelines and strategies for completion.
In order to maximize the functionality of the mobile data network, users will require a growing suite of applications optimized for the wireless user. Many of these services can be applied based on the location of the user and interface with the user location supplied by the mobile data modem automated vehicle locator service.

The department of Agriculture is looking at an application on which their inspectors can do all their forms on site live and wirelessly.

Motion: Also approve No. 2 and No. 4 for an initiative for the UWIN board.

Second: Lloyd Johnson **Vote unanimously in the affirmative**.

No. 8 Test mesh modem cards in an incident command environment

Mesh networking provides the ability to create ad-hoc data networks in localized environment in real-time.

Doug Chandler said mesh networking had been talked about a couple of years ago; would require some funds expenditures probably within ITS, DPS, or anyone else wanting to be involved. Phil Bates reminded the group of the pilot with Homeland security that would be testing the mesh networking.

Motion: Christine Mitchell: Move ahead to accept this item as an initiative, based on the fact that testing the mesh networking will be part of a pilot with Homeland Security and DPS.

Second: Lloyd Johnson

Vote unanimously in the affirmative

No. 3 Establish the Utah Grid Group (UGG)

The UGG could be tasked with developing the standards and procedures to create the Utah State Grid, a system to leverage and optimize the use of all state computing resources to benefit both wired and wireless users.

Steve Whittaker encouraged UWIN group to establish the grid group to keep the state ahead on technology. It is an integral part of what we will be doing in the next 4-5 years.

Dave Fletcher said grid computing can make wireless networks more efficient and establish architecture on which we can build. Randy Hughes' opinion was that it was not out of the scope of this group to make recommendations, even though it will be in the future.

Dave Fletcher said it is the only group that exists on a regular basis that includes formal IT representation from such a broad group of agencies and local governments.

Motion: Lloyd Johnson made recommendation to refer this item to the new CIO for review.

Second: Christine Mitchell

Vote unanimously in the affirmative

VIII. Other Dates

Statewide Security Conference: University Park Hotel, March 7th and 8th

ITS Technology Open House: February 17th, SOB Auditorium

NASTD (National Association of State Telecommunications Directors): Salt Lake Hilton, June 4-8

IX. Next meeting: March 11, 2005

Adjourned 11:55 am